

EPA

U.S. EPA
999 18th Street, Suite 500
Denver, CO 80202

START3
Technical Direction Document

**REMOVAL CERCLA (Task Order
#0010)**
URS Operating Services

TDD #: TO-1005-01
Contract: EP-W-05-000

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		I Period: Option Period 1
1 Purpose: Work Assignment Initiation		
I Priority: High		I Start Date: 05/03/2010
Overtime:		I Completion Date: 06/30/2011
I Funding Category: CERCLA Removal		Invoice Unit:
I Project/Site Name: Rico-Argentine SLLouis Tunnel (RS)		WorkArea: Removal/Response Activities
Project Address:		Activity: Removal Assessment
County:		Work Area Code:
City, State:		Activity Code: RS
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT
1 SSID: 08BU		FPN:
CERCLIS:		Performance Based: No
Operable Unit: 01		
Authorized TDD Ceiling:		Cost/Fee LOE
Previous Action(s):		<div style="border: 2px solid black; padding: 10px; text-align: center;"> <h1>Ex. 4 CBI</h1> </div>
This Action:		
New Total:		

Specific Elements

Description of Work:

Scope of Work:

Summarize WQ Sampling, especially most recent, but including that which provides most comprehensive understanding of flows from the adit. This will include surface and groundwater in the vicinity of the St Louis Tunnel/Adit releases to determine the associated impacts to the Dolores River. Additional support may require identifying contaminant sources, including sediment/treatment ponds, mine workings flows and solid waste sources that contribute to releases to surface water. A summary of relevant WQ data with sample dates, locations, organization, WQ results and flows is needed in a technical memo. In the event sampling is needed, a sampling plan is required before collection efforts begin.

Deliverables & Schedule (Including Technical Completion Date)

Submit a data summary report and preliminary evaluation of impacts to the Dolores River by May 21, 2010. Provide a verbal assessment of the data that may be available to address the above question by May 6, 2010. Sampling may be required in the short-term, i.e., within the next 10 days.

Section

- Signed by Nghia Pham/R8/USEPA/US on 05/03/2010 03:04:57 PM, according to /R8/USEPA/US

: Steve Way

Date: 05/03/2010

Phone #: (303)312-6723

Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 05/04/2010 10:10:52 AM, acco...

Project Officer: Joni Sandoval

Date: 05/04/2010

Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 05/07/2010 08:40:59 AM,...

Contracting Officer: Maria Houston

Date: 05/07/2010

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 05/07/2010 10:43:05 AM, accordi...

Contractor Contact: Chuck Baker

Date: 05/07/2010

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Technical Direction Document
**REMOVAL CERCLA (Task Order
#0010)**
URS Operating ServicesTDD #: TO-1005-01
Amendment#:A
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		I Period: Option Period 1	
I Purpose: Change Period of Performance, Incremental Funding			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/30/2011	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel (RS)		WorkArea: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee LOE	
Previous Action(s):		Ex. 4 CBI	
This Action:			
New Total:			

Specific Elements**Description of Work:**

Increase funding and LOE, and Change Period of Performance from 06/30/11 to 09/30/11 for following justification:

Justification:

Provide additional technical support beyond the original scope to support the Removal Evaluation to include:

- 1) a limited floodplain analysis for the area around the St Louis Tunnel Ponds, perform a preliminary Geotechnical analysis of the settling pond dike system, and perform water quality and sediment sampling as directed to characterize the nature of the releases from the Site.
- 2) In addition, provide recommended follow up analysis as needed to complete the above tasks and support recommended removal action evaluation.
- 3) Provide engineering support to develop sludge removal plans at the site including considering factors such as pond stability, sludge handling, mechanical removal alternatives and stabilization and storage and water management procedures during the removal process.
- 4) Provide recommendation regarding water treatment options for conducting temporary and intermittent water treatment of the discharge from the St. Louis Tunnel during critical flow

conditions and pond sludge removal.

Deliverables & Schedule (Including Technical Completion Date)

Perform the floodplain analysis and preliminary geotechnical analysis of the ponds and submit a technical memo report by October 1, 2010. The tasks 2 through 4 will have schedules developed following planning discussion with the OSC.

Section

: Way

Date: 09/01/2010

Phone #:

Project Officer Section - Signed by Nghia Pham/R8/USEPA/US on 09/01/2010 10:31:17 AM, accord...

Project Officer: Joni Sandoval

Date: 09/01/2010

Contracting Officer Sgction - Signed by Maria Houston/R8/USEPA/US on 09/03/2010 10:44:26 AM,...

Contracting Officer: Maria Houston

Date: 09/03/2010

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 09/07/2010 12:43:53 PM, accordi...

Contractor Contact: Chuck Baker

Date: 09/07/2010

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999 18th Street, Suite 500
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Technical Direction Document
REMOVAL CERCLA (Task Order
#0010)
URS Operating ServicesTDD #: TO-1005-01
Amendment#:B
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		I Period: Option Period 1	
I Purpose: Incremental Funding			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/30/2011	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel (RS)		WorkArea: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: flo	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee: LOE	
Previous Action(s):		Ex. 4 CBI	
This Action:			
New Total:			

Specific Elements

Description of Work:

This mod is incremental finding and includes no new tasks or deliverables. Deliverable due dates remain the same.

Section

: Way

Date: 12/06/2010

Phone #:

Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 12/08/2010 03:57:12 PM, acco...

Project Officer: Joni Sandoval

Date: 12/08/2010

Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 12/10/2010 09:36:01 AM,...

Contracting Officer: Maria Houston

Date: 12/10/2010

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 12/10/2010 11:58:28 AM, accordi...

Contractor Contact: Chuck Baker

Date: 12/10/2010

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Technical Direction Document
**REMOVAL CERCLA (Task Order
#0010)**
URS Operating ServicesTDD #: TO-1005-01
Amendment#: C
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		! Period: Option Period 1	
! Purpose: Incremental Funding			
! Priority: High		! Start Date: 05/03/2010	
Overtime:		! Completion Date: 09/30/2011	
! Funding Category: CERCLA Removal		Invoice Unit:	
! Project/Site Name: Rico-Argentine St.Louis Tunnel (RS)		WorkArea: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
! SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee 53.4 1000 LOE	
Previous Action(s):		Ex. 4 CBI	
This Action:			
New Total:			

Specific Elements

Description of Work:

This mod is incremental funding to complete the report and includes no new tasks or deliverables.
Deliverable due dates remain the same.

Section

: Steve Way	Date: 12/21/2010
Phone #:	
Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 12/21/2010 09:42:56 AM, acco...	
Project Officer: Joni Sandoval	Date: 12/21/2010
Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 12/23/2010 11:06:53 AM,...	
Contracting Officer: Maria Houston	Date: 12/23/2010
Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 12/27/2010 10:39:21 AM, accordi...	
Contractor Contact: Chuck Baker	Date: 12/27/2010

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Technical Direction DocumentREMOVAL CERCLA (Task Order
#0010)
URS Operating ServicesTDD #: TO-1005-01
Amendment#:D
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		I Period: Option Period 1	
I Purpose: Amended SOW, Incremental Funding			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/30/2011	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel (RS)		Work Area: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee	
Previous Action(s):		LOE	
This Action:		Ex. 4 CBI	
New Total:			

Specific Elements**Description of Work:**

Scope of Work: Provide technical support and PRP oversight support continuing on the original scope to support the Removal Evaluation and during the Removal action at the Site to include:

- 1) Review and provide comments on PRP deliverables including the Work Plan and all subsequent technical deliverables under required under the Administrative Order.
- 2) Provide engineering support to develop sludge removal plans at the site including considering factors such as pond stability, sludge handling, mechanical removal alternatives and stabilization and storage and water management procedures during the removal process.
- 3) Provide engineering evaluation and review regarding water treatment options for the discharge from the St. Louis Tunnel including technology review and recommendations, onsite field investigation to support technology evaluation.

Mine workings investigations including mine mapping, hydrogeology analysis of influent water sources to the workings and potential hydraulic controls for influent and effluent from the adit. This shall begin by February 22, 2011 with a review of existing mapping data provided from the PRP and/or available in historical records. Pending submittal of existing mapping by the PRP, preliminary mine maps delineating major geologic and mine features shall be developed by June 30, 2011. (Additional OSC direction to be provided before initiating this task.)

Deliverables & Schedule (Including Technical Completion Date) Provide technical review comments of the PRP Work Plan by February 2011. Subsequent PRP deliverable reviews will generally be due within 14 days of receipt from the PRP. Other

technical support and associated deliverables shall have a schedule established as task details are developed.

Section

: Steven Way
Phone #:

Date: 02/22/2011

Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 02/22/2011 08:26:26 AM, acco...

Project Officer: Joni Sandoval

Date: 02/22/2011

Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 02/22/2011 08:37:33 AM,...

Contracting Officer: Maria Houston

Date: 02/22/2011

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 02/22/2011 11:16:17 AM, accordi...

Contractor Contact: Chuck Baker

Date: 02/22/2011

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Technical Direction Document
REMOVAL CERCLA (Task Order
#0010)
URS Operating ServicesTDD #: TO-1005-01
Amendment#:E
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel (RS)		I Period: Option Period 1	
I Purpose: Change Period of Performance, Incremental Funding			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/04/2012	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel (RS)		WorkArea: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee	LOE
Previous Action(s):		Ex. 4 CBI	
This Action:			
New Total:			

Specific Elements**Description of Work:**

Change Period of Performance from 09/30/2011 to 09/04/2012, and increase funding & LOE for justification below:

Justification:

Scope of Work: Provide technical support and PRP oversight support continuing on the original scope to support the Removal Evaluation and during the Removal action at the Site to include 1-4 below. New work includes performing tracer studies to assess surface water loss to the workings at the Blaine and Argentine mines on Silver creek. Field oversight activities are expected to begin by June 2011 on an approximate 25 to 50% basis depending on the nature of the work the PRP performs.

- 1) Review and provide comments on PRP deliverables including the Work Plan and all subsequent technical deliverables under required under the Administrative Order.
- 2) Provide engineering support to develop sludge removal plans at the site including considering factors such as pond stability, sludge handling, mechanical removal alternatives and stabilization and storage and water management procedures during the removal process.
- 3) Provide engineering evaluation and review regarding water treatment options for the discharge from the St. Louis Tunnel including technology review and recommendations, onsite field investigation to support technology evaluation.

Mine workings investigations including mine mapping, hydrogeology analysis of influent water sources to the workings and potential hydraulic controls for influent and effluent from the adit. This shall begin by February 15, 2011 with a review of

existing mapping data provided from the PRP and/or available in historical records. Pending submittal of existing mapping by the PRP, preliminary mine maps delineating major geologic and mine features shall be developed by June 30, 2011. (Additional OSC direction to be provided before initiating this task.)

Deliverables & Schedule (Including Technical Completion Date) Provide technical review comments of the PRP Work Plan by February 1, 2011. Subsequent PRP deliverable reviews will generally be due within 14 days of receipt from the PRP. Other technical support and associated deliverables shall have a schedule established as task details are developed.

Section

: Way

Date: 05/17/2011

Phone #:

Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 05/17/2011 09:00:35 AM, acco...

Project Officer: Joni Sandoval

Date: 05/17/2011

Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 05/17/2011 11:52:17 AM,...

Contracting Officer: Maria Houston

Date: 05/17/2011

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 05/20/2011 10:16:37 AM, accordi...

Contractor Contact: Chuck Baker

Date: 05/20/2011

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Technical Direction Document
**REMOVAL CERCLA (Task Order
#0010)**
URS Operating ServicesTDD #: TO-1005-01
Amendment#: F
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel		I Period: Option Period 1	
I Purpose: Incremental Funding, Change Activity Code			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/04/2012	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel		WorkArea: Removal/Response Activities	
Project Address:		Activity: CERCLA Removal Action Support	
County:		Work Area Code:	
City, State:		Activity Code: RV	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee	
Previous Action(s):		LOE	
This Action:		Ex. 4 CBI	
New Total:			

Specific Elements

Description of Work:**Change Activity code from RS to RV effective as July 2nd, 2011, and increase funding & LOE.****Justification:**

Scope of Work: Provide technical support and PRP oversight support continuing on the original scope to support the Removal Evaluation and during the Removal action at the Site to include 1-4 below. New work includes performing tracer studies to assess surface water loss to the workings at the Blaine and Argentine mines on Silver Creek. Field oversight activities are expected to begin by June 2011 on an approximate 25 to 50% basis depending on the nature of the work the PRP performs.

- 1) Review and provide comments on PRP deliverables including the Work Plan and all subsequent technical deliverables under required under the Administrative Order.
- 2) Provide engineering support to develop sludge removal plans at the site including considering factors such as pond stability, sludge handling, mechanical removal alternatives and stabilization and storage and water management procedures during the removal process.
- 3) Provide engineering evaluation and review regarding water treatment options for the discharge from the St. Louis Tunnel including technology review and recommendations, onsite field investigation to support technology evaluation.

40 Mine workings investigations including mine mapping, hydrogeology analysis of influent water sources to the workings and potential hydraulic controls for influent and effluent from the adit. This shall begin by February 15, 2011 with a review of existing mapping data provided from the PRP and/or available in historical records. Pending submittal of existing mapping by

the PRP, preliminary mine maps delineating major geologic and mine features shall be developed by June 30, 2011. (Additional OSC direction to be provided before initiating this task.)

Deliverables & Schedule (Including Technical Completion Date) Provide technical review comments of the PRP Work Plan by February 1, 2011. Subsequent PRP deliverable reviews will generally be due within 14 days of receipt from the PRP. Other technical support and associated deliverables shall have a schedule established as task details are developed.

Section

: Way

Date: 07/11/2011

Phone #:

Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 07/12/2011 08:58:03 AM, acco...

Project Officer: Joni Sandoval

Date: 07/12/2011

Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 07/13/2011 10:25:23 AM,...

Contracting Officer: Maria Houston

Date: 07/13/2011

Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 07/13/2011 02:12:54 PM, accordi...

Contractor Contact: Chuck Baker

Date: 07/13/2011

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Technical Direction Document
**REMOVAL CERCLA (Task Order
#0010)**
URS Operating ServicesTDD #: TO-1005-01
Amendment#: G
Contract: EP-W-05-050

! = required field

TDD Name: Rico-Argentine St.Louis Tunnel		I Period: Option Period 1	
I Purpose: Incremental Funding			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/04/2012	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel		WorkArea: Removal/Response Activities	
Project Address:		Activity: CERCLA Removal Action Support	
County:		Work Area Code:	
City, State:		Activity Code: RV	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			

Authorized TDD Ceiling:	Cost/Fee:	LOE
Previous Action(s):	Ex. 4 CBI	
This Action:		
New Total:		

Specific Elements

Description of Work:

Increase funding for;

1. Expanded source investigation of acid mine drainage using organic and salt tracer investigations
2. Continued PRP oversight onsite and technical review of deliverables
3. Reporting of findings.

Section

: Steve Way	Date: 09/26/2011
Phone #:	
Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 09/26/2011 04:29:58 PM, accq...	
Project Officer: Joni Sandoval	Date: 09/26/2011
Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 09/27/2011 06:56:49 AM....	
Contracting Officer: Maria Houston	Date: 09/27/2011
Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 09/28/2011 08:29:49 AM, accordi...	
Contractor Contact: Chuck Baker	Date: 09/28/2011

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Denver, CO 80202START3
Technical Direction DocumentREMOVAL CERCLA (Task Order
#0010)

URS Operating Services

TDD #: TO-1005-01
Amendment#: H
Contract: EP-W-05-050! = required field ☐ Moved To EAS

TDD Name: Rico-Argentine St.Louis Tunnel		I Period: Option Period 1	
I Purpose: Change Activity Code			
I Priority: High		I Start Date: 05/03/2010	
Overtime:		I Completion Date: 09/04/2012	
I Funding Category: CERCLA Removal		Invoice Unit:	
I Project/Site Name: Rico-Argentine St.Louis Tunnel		WorkArea: Removal/Response Activities	
Project Address:		Activity: Removal Assessment	
County:		Work Area Code:	
City, State:		Activity Code: RS	
Zip:		EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
I SSID: 08BU		FPN:	
CERCLIS:		Performance Based: No	
Operable Unit:			
Authorized TDD Ceiling:		Cost/Fee	LOE (Hours)
Previous Action(s):		Ex. 4 CBI	
This Action:			
New Total:			
Specific Elements			

Description of Work:

This amendment is to change the activity code back to RS from RV. No new tasks or deliverables.

Section

: Steve Way	Date: 10/11/2011
Phone #:	
Project Officer Section - Signed by Joni Sandoval/R8/USEPA/US on 10/11/2011 03:39:57 PM, acco...	
Project Officer: Joni Sandoval	Date: 10/11/2011
Contracting Officer Section - Signed by Maria Houston/R8/USEPA/US on 10/12/2011 08:52:54 AM,...	
Contracting Officer: Maria Houston	Date: 10/12/2011
Contractor Section - Signed by Chuck Baker/Denver/URSCorp on 10/13/2011 10:46:29 AM, accordi...	
Contractor Contact: Chuck Baker	Date: 10/13/2011

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Bryan Williams 303-291-8212

REPORTING PERIOD: OCTOBER 2, 2010 – OCTOBER 29, 2010
COMPLETION DATE: SEPTEMBER 30, 2011

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Begin 2nd phase of project.

DETAILED PROGRESS ACTIVITY

- Begin second phase of contract, including preparing subcontracts for additional sampling as directed.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Data review	5/10	5/10	6/10		85%	
2 Sampling event	5/10	6/10	6/10	6/4/10	85%	
3 Trip report	7/10	7/10	8/10		50%	

- TDD budgeted dollars are at 41.25%.
- TDD budgeted hours are at 43.59%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Continue to assist OSC.

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Bryan Williams 303-291-8212

REPORTING PERIOD: OCTOBER 30, 2010 – NOVEMBER 26, 2010
COMPLETION DATE: SEPTEMBER 30, 2011

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Begin 2nd phase of project.

DETAILED PROGRESS ACTIVITY

- continued second phase of project.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Data review	5/10	5/10	6/10		85%	
2 Sampling event	5/10	6/10	6/10	6/4/10	85%	
3 Trip report	7/10	7/10	8/10		50%	

- TDD budgeted dollars are at 58.04%.
- TDD budgeted hours are at 64.92%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Continue to assist OSC.

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tumor (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Bryan Williams 303-291-8212

REPORTING PERIOD: NOVEMBER 27, 2010 – DECEMBER 31, 2010
COMPLETION DATE: SEPTEMBER 30, 2011

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Begin 2nd phase of project.

DETAILED PROGRESS ACTIVITY

- Continued second phase of project.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Data review	5/10	5/10	6/10		85%	
2 Sampling event	5/10	6/10	6/10	6/4/10	85%	
3 Trip report	7/10	7/10	8/10		50%	

- TDD budgeted dollars are at 88.37%.
- TDD budgeted hours are at 85.25%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Change project manager to Jan Christner.

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tummel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Jan Christner 720-810-0759

REPORTING PERIOD: JANUARY 1, 2011 – JANUARY 28, 2011
COMPLETION DATE: SEPTEMBER 30, 2011

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Water quality, sediment, and soil sampling (June and November 2010) and initial site familiarization.
- Prepared sampling reports.
- Initial hydrology and geotechnical site characterization.
- Review site documents.
- Review submittals from PRP including work plans and schedules.
- Compiled and reviewed existing water quality data and prepared technical memo.
- URS offices are unable to provide technical support for this project due to conflict of interest.
- Identify sources of water treatment, geotechnical, and mining expertise.
- TDD needs to be amended to provide funding for current tasking.

DETAILED PROGRESS ACTIVITY

- Prepared and submitted Sampling and Analysis Report for November 2010 water quality, sediment, and soil sampling for EPA review and comment.
- Review of work plan and schedule submitted by PRP.
- Conference call with Steve Way and Dan Wall regarding site ecological risks.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Initial Site Characterization	5-10-10	5-10-10	6-30-10		90%	Additional sampling tasks added during Fall 2010
2 Work Plan Support	11-2010	11-2010				
3 Technical Expertise – Water Treatment, Geotechnical, Mining	12-2010	12-2010				

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Jan Christner 720-810-0759

REPORTING PERIOD: JANUARY 29, 2011 – FEBRUARY 25, 2011
COMPLETION DATE: SEPTEMBER 30, 2011

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Water quality, sediment, and soil sampling (June and November 2010) and initial site familiarization.
- Prepared sampling reports.
- Initial hydrology and geotechnical site characterization.
- Review site documents.
- Review submittals from PRP including work plans and schedules.
- Compiled and reviewed existing water quality data and prepared technical memo.
- URS offices are unable to provide technical support for this project due to conflict of interest.
- Identify sources of water treatment, geotechnical, and mining expertise.

DETAILED PROGRESS ACTIVITY

- Reviewed Removal Action Work Plan provided by PRP.
- Assisted EPA in revising the Removal Action Work Plan and schedule.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Initial Site Characterization	5-10-10	5-10-10	6-30-10		90%	Additional sampling tasks added during Fall 2010
2 Work Plan Support	11-2010	11-2010				
3 Technical Expertise – Water Treatment, Geotechnical, Mining	12-2010	12-2010				

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
VITY: Removal Assessment

EPA CONTACT: Steve Way 303-312-6723
MANAGER: Jan Christner 720-810-0759

ORTING PERIOD: APRIL 30, 2011 – MAY 27, 2011
IPLETION DATE: SEPTEMBER 04, 2012

IMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Task 1 - Removal Evaluation
- Task 2 – Document Review
- Task 3 – Solids Management
- Task 4 – Mine Investigation
- Task 5 – Water Treatment

TAILED PROGRESS ACTIVITY

Reviewed and commented on ARCO submittals. Attended conference call regarding EPA comments to planning documents. Attended coordination/information sharing meeting with PRP and EPA.

Completed procurement for tracer study on Silver Creek. Worked with EPA, USGS, and tracer study contractor to plan work and site logistics.

Coordinated with mine investigation group. Provided oversized map scan and copies. Provided Silver Creek flow and chemistry data summary.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Removal Evaluation	5-10-10	5-10-10	Ongoing			
2 Document Review	11-2010	11-2010	Ongoing			
3 Solids Management	12-2010	12-2010	Ongoing			
4 Mine Investigation	3-2011	3-2011	Ongoing			
5 Water Treatment	TBD	TBD	Ongoing			

- TDD budgeted dollars are at 59.26%.
- TDD budgeted hours are at 55.43%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Assist with June tracer study efforts.
- Continue to review work plans and other PRP submittals.
- Prepare for oversight of summer 2011 solids management.
- Additional tasks as requested by task monitor.

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

ITE NAME: Rico-Argentine St. Louis Tunnel (RS)
VITY: Removal Assessment

EPA CONTACT: Steve Way 303-312-6723
MANAGER: Jan Christner 720-810-0759

ORTING PERIOD: MAY 28, 2011 – JULY 1, 2011
PLETION DATE: SEPTEMBER 04, 2012

MARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Task 1 - Removal Evaluation
- Task 2 - Document Review
- Task 3 - Solids Management
- Task 4 - Mine Investigation
- Task 5 - Water Treatment

TAILED PROGRESS ACTIVITY

Reviewed and commented on ARCO submittals and mine maps. Attended conference call regarding EPA comments to planning documents. Attended meeting to discuss solids removal with PRP, EPA, and BOR.

Coordinated efforts for the initial tracer study on Silver Creek. Worked with EPA, USGS, and tracer study contractor to plan work and site logistics.

Participated in site visit to assist with tracer study and collect water samples for water quality analysis. Shipped samples to ESAT laboratory for total and dissolved metals analysis.

Coordinated with mine investigation group and provided data to EPA as requested.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
Removal Evaluation	5-10-10	5-10-10	Ongoing			
Document Review	11-2010	11-2010	Ongoing			
Solids Management	12-2010	12-2010	Ongoing			
Mine Investigation	3-2011	3-2011	Ongoing			
Water Treatment	TBD	TBD	Ongoing			

TDD budgeted dollars are at 48.99%.

TDD budgeted hours are at 45.95%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Follow up on June tracer study efforts.
- Continue to review work plans and other PRP submittals.
- Prepare for and begin oversight of summer 2011 solids management.
- Additional tasks as requested by task monitor.

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Jan Christner 720-810-0759

REPORTING PERIOD: JULY 2, 2011- JULY 29, 2011
COMPLETION DATE: SEPTEMBER 04, 2012

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Task 1 - Removal Evaluation
- Task 2 - Document Review
- Task 3 - Solids Management
- Task 4 - Mine Investigation
- Task 5 - Water Treatment

DETAILED PROGRESS ACTIVITY

- Assisted in efforts to plan an organic dye tracer study. Worked with EPA, USGS, and tracer study contractor to plan work and site logistics. Prepared documentation of plans.
- Updated site status summary.
- Coordinated with mine investigation group and provided data to EPA as requested.
- Reviewed SAP, QAPP, and Initial Solids Removal Plan submittals and provided comments.
- Provided comments to EPA summary of mine investigation.
- Prepared budget for projected summer work.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Removal Evaluation	5-10-10	5-10-10	Ongoing			
2 Document Review	11-2010	11-2010	Ongoing			
3 Solids Management	12-2010	12-2010	Ongoing			
4 Mine Investigation	3-2011	3-2011	Ongoing			
5 Water Treatment	TBD	TBD	Ongoing			

- TDD budgeted dollars are at 52.54%.
- TDD budgeted hours are at 47.38%.

PLANNED ACTIVITIES FOR THE NEXT MONTH

- Follow up on June tracer study efforts and data.
- Continue to review work plans and other PRP submittals. Track data on AEComm .ftp site.
- Begin oversight of summer 2011 solids management when work commences.
- Support mine investigation.
- Additional tasks as requested by task monitor.

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

TE NAME: Rico-Argentine St. Louis Tunnel (RS)
ITY: Removal Assessment

PA CONTACT: Steve Way 303-312-6723
MANAGER: Jan Christner 720-810-0759

RTING PERIOD: JULY 30, 2011 – AUGUST 26, 2011
PLETION DATE: SEPTEMBER 04, 2012

MARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

Task 1 - Removal Evaluation
Task 2 – Document Review
Task 3 – Solids Management
Task 4 – Mine Investigation
Task 5 – Water Treatment

FAILED PROGRESS ACTIVITY

Assisted in efforts to plan an organic dye tracer study. Worked with EPA, USGS, and tracer study contractor to plan work and site logistics. Prepared documentation of plans. Checked ISCO sampler support requirements. Searched for vendors able to perform high resolution fluorescence analysis.

Provided analytical and equipment support for EPA/DRMS mine entry. Reviewed ARCO request for additional work for mine entry and communicated requirements to EPA.

Processed data from June tracer study and provided to EPA and mine investigation participants.

Reviewed ARCO .ftp site.

Reviewed ARCO flow data and provided graphs of current data to project participants. Provided comments to EPA regarding suspect flow rate measurements from DR-3 monitor.

Updated site status summary.

Coordinated with mine investigation group and provided data to EPA as requested.

Reviewed revised SAP, QAPP, and Initial Solids Removal Plan submittals and provided comments.

Prepared updated cost summary.

Tracked ARCO progress toward meeting Work Plan timelines.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Removal Evaluation	5-10-10	5-10-10	Ongoing			
2 Document Review	11-2010	11-2010	Ongoing			
3 Solids Management	12-2010	12-2010	Ongoing			
4 Mine Investigation	3-2011	3-2011	Ongoing			
5 Water Treatment	TBD	TBD	Ongoing			

EPA START, REGION 8
CONTRACT NO. EP-W-05-050

TECHNICAL DIRECTION DOCUMENT (TDD)
MONTHLY PROGRESS REPORT

TDD NO. 1005-01

EPA SITE NAME: Rico-Argentine St. Louis Tunnel (RS)
ACTIVITY: Removal Assessment

KEY EPA CONTACT: Steve Way 303-312-6723
UOS MANAGER: Jan Christner 720-810-0759

REPORTING PERIOD: AUGUST 27, 2011 – SEPTEMBER 30, 2011
COMPLETION DATE: SEPTEMBER 04, 2012

SUMMARY/HIGHLIGHTS OF PROGRESS-PROBLEMS

- Task 1 - Removal Evaluation
- Task 2 – Document Review
- Task 3 – Solids Management
- Task 4 – Mine Investigation
- Task 5 – Water Treatment

DETAILED PROGRESS ACTIVITY

- Assisted in efforts to plan an organic dye tracer study. Worked with EPA, USGS, and tracer study contractor to plan work and site logistics and acquire equipment to simplify sampling the Argentine Shaft. Prepared planning document that combined plans for the stream flow tracer and in-mine tracer studies and provided preliminary results of previous work. Prepared schedule.
- Provided analytical results for June and August surface water and mine water samples.
- Reviewed updated ARCO flow data and provided graphs of current data to project participants.
- Updated site status summary.
- Reviewed Field Sampling Plan for geotechnical work and the Investigation Plan for Collapsed Adit Area at St. Louis Tunnel and provided comments.
- Prepared initial RCMS forms and submitted to EPA OSC for approval.
- Tracked ARCO progress toward meeting Work Plan timelines.

SCHEDULING/CORRECTIVE ACTION

Task #	Planned Start Date	Actual Start Date	Planned Completion date	Actual Completion date	Percent completion	Schedule variances:
1 Removal Evaluation	5-10-10	5-10-10	Ongoing			
2 Document Review	11-2010	11-2010	Ongoing			
3 Solids Management	12-2010	12-2010	Ongoing			
4 Mine Investigation	3-2011	3-2011	Ongoing			
5 Water Treatment	TBD	TBD	Ongoing			

- TDD budgeted dollars are at 48.45%.
- TDD budgeted hours are at 63.58%.